

# Machine Learning and Data Science

## Régression linéaire simple

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# Regressions

## Simple Linear Regression

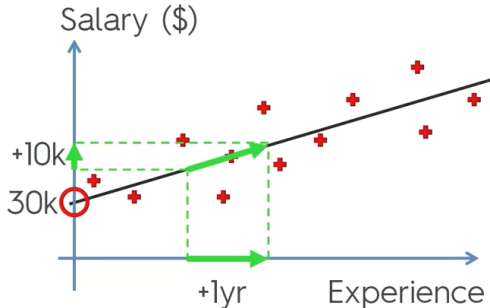
$$y = b_0 + b_1 * x_1$$

Diagram illustrating the components of the Simple Linear Regression equation:

- $y$  is the **Dependent variable (DV)**.
- $b_0$  is the **Constant**.
- $b_1$  is the **Coefficient**.
- $x_1$  is the **Independent variable (IV)**.

# Regressions

Simple Linear Regression:



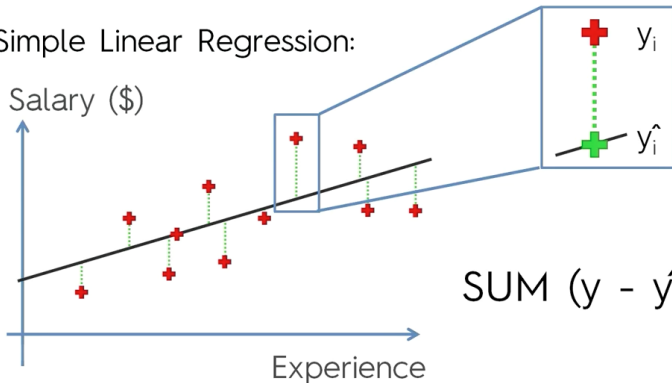
$$y = b_0 + b_1 * x$$



$$\text{Salary} = b_0 + b_1 * \text{Experience}$$

# Ordinary Least Squares

Simple Linear Regression:



$$\text{SUM } (y - \hat{y})^2 \rightarrow \min$$